**IN THE CLAIMS:**

1. - 9. Cancelled

10. (currently amended) A semiconductor component comprising:

(a) a semiconductor substrate having an emitter layer, a base layer and a collector layer, wherein the base layer is over the collector layer, and the emitter layer has a surface passivation ledge disposed on the base layer;

(b) a dielectric layer formed over the passivation ledge; and

(c) a base contact overlying a portion of the base layer and overlapping onto the dielectric layer, whereby an exposed portion of the base layer is adjacent the emitter layer and the base contact, and the emitter layer is not in physical contact with the base contact.

11. (original) The semiconductor component of claim 10 wherein the dielectric layer is comprised of a material selected from the group consisting of silicon nitride, aluminum nitride, silicon dioxide, silicon oxynitride and mixtures thereof.

12. (original) The semiconductor component of claim 10 wherein a region of the base layer and a region of the collector layer form boundaries that are substantially aligned to a first edge of the base contact that is remote from the emitter layer.

13. (original) The semiconductor component of claim 10 wherein the base layer is comprised of a p-type material.

14. (currently amended) A heterojunction bipolar transistor (HBT) comprising:

a) a substrate layer, a subcollector layer, a collector layer, a base layer and an emitter layer, each layer formed on top of the preceding layer;

b) an emitter mesa and a passivating ledge formed in the emitter layer; and

c) base contacts deposited on the base layer wherein the base contacts are self aligned with respect to the passivation ledge and are laterally spaced apart from the entire emitter layer.

15. (previously presented) The HBT of claim 14, further comprising:

d) a dielectric layer overlying at least a portion of the passivating ledge.

16. (currently amended) A semiconductor component comprising:

(a) a semiconductor substrate having an emitter layer, a base layer and a collector layer, wherein the base layer is over the collector layer, and the emitter layer has a surface passivation ledge disposed on the base layer;

(b) a dielectric layer formed over the passivation ledge; and

(c) a base contact overlying a portion of the base layer and overlapping onto the dielectric layer, wherein the emitter layer is not in physical contact with the base contact.

17. (currently amended) A semiconductor component comprising:

(a) a semiconductor substrate having an emitter layer, a base layer and a collector layer, wherein the base layer is over the collector layer, and the emitter layer has a surface passivation ledge disposed on the base layer;

(b) a dielectric layer formed over the passivation ledge; and

(c) a base contact overlying a portion of the base layer and overlapping onto the dielectric layer, wherein the base contact is laterally spaced apart from the entire emitter layer.

18. (currently amended) A heterojunction bipolar transistor (HBT) comprising:
    a) a substrate layer, a subcollector layer, a collector layer, a base layer and an emitter layer, each layer formed on top of the preceding layer;
    b) an emitter mesa and a passivating ledge formed in the emitter layer;
    c) base contacts deposited on the base layer wherein the base contacts are self aligned with respect to the passivation ledge; and
    d) a dielectric layer overlying at least a portion of the passivating ledge, wherein the emitter layer is not in physical contact with the base contact.

19. (new) The HBT of claim 14 wherein the dielectric layer is comprised of a material selected from the group consisting of silicon nitride, aluminum nitride, silicon dioxide, silicon oxynitride and mixtures thereof.

20. (new) The HBT of claim 14 wherein the base layer is comprised of a p-type material.

21. (new) The semiconductor component of claim 16 wherein a portion of the dielectric layer is between the base layer and the base contact.

22. (new) The semiconductor component of claim 16 wherein the dielectric layer is comprised of a material selected from the group consisting of silicon nitride, aluminum nitride, silicon dioxide, silicon oxynitride and mixtures thereof.

23. (new) The semiconductor component of claim 16 wherein a region of the base layer and a region of the collector layer form boundaries that are substantially aligned to a first edge of the base contact that is remote from the emitter layer.

24. (new) The semiconductor component of claim 10 wherein the base layer is comprised of a p-type material.

25. (new) The semiconductor component of claim 17 wherein the dielectric layer is comprised of a material selected from the group consisting of silicon nitride, aluminum nitride, silicon dioxide, silicon oxynitride and mixtures thereof.

26. (new) The semiconductor component of claim 17 wherein the base layer is comprised of a p-type material.

27. (new) The HBT of claim 18 wherein a portion of the dielectric layer is between the base layer and the base contact.

28. (new) The semiconductor component of claim 18 wherein the dielectric layer is comprised of a material selected from the group consisting of silicon nitride, aluminum nitride, silicon dioxide, silicon oxynitride and mixtures thereof.

29. (new) The semiconductor component of claim 18 wherein the base layer is comprised of a p-type material.